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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,148	06/23/2003	Elliott H. Rachlin	H0004396	9884
128	7590	08/23/2004	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			LE, JOHN H	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,148

Applicant(s)

RACHLIN, ELLIOTT H.

Examiner

John H Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,7,14,17,19,26,31 and 32 is/are rejected.
- 7) ☒ Claim(s) 2,3,5,8-13,15,16,18,20-25,27-30 and 33-50 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 43 is objected to because of the following informalities:

Claim 43, line 3, "a computer to detect depressurization". Is this computer different with the computer, which described in line 2?

Claim 43, line 7, "a computer to determine a rate". Is this computer different with the computer, which described in line 2?

Claim 43, line 10, "a computer to present information". Is this computer different with the computer, which described in line 2?

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6-7, 14, 19, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corkill (USP 6,216,674) in view of Fierro et al. (USP 6,549,857).

Regarding claims 1, 6-7, 14, 19, and 26, Corkill discloses a vehicle fuel system has on-board diagnostics for leak testing, the system comprising: a pressure sensor (15) configured to sense pressure within the compartment (tank 13 in fig.1) and supply pressure signals representative thereof; a temperature

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sensor (14) configured to sense temperature within the compartment (Col.8, lines 60-63) and supply temperature signals representative thereof; and the processor (ECU 10) coupled to receive the pressure signals and the temperature signals (e.g. Col.3, lines 22-24), the processor configured, in response thereto, to determine different of pressure with respect to time (e.g. Col.3, lines 59-65); and to determine a size of the aperture (Col.7, lines 1-3) based at least in part on the different of pressure with respect to time (e.g. Figs.2-5, Col.6, line 65-Col.7, line 3), the predetermined volume, the sensed compartment pressure, and the sensed compartment temperature (e.g. Col.6, lines 30-42).

Corkill fails to disclose a derivative of pressure with respect to time and determine a size of the aperture based at least in part on the derivative of pressure.

Fierro et al. teach a derivative of pressure with respect to time (periods) (e.g. Col.7, lines 14-25) and determine a size of the aperture (size of line, Col.1, lines 27-30) based at least in part on the derivative of pressure (e.g. Col.13, lines 48-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a derivative of pressure with respect to time and determine a size of the aperture based at least in part on the derivative of pressure as taught by Fierro et al. in a vehicle fuel system has on-board diagnostics for leak testing of Corkill for purpose of providing a method for reliable and accurate detection of leaks in pressurized pipe systems (Fierro et al., Col.6, lines 36-37).

4. Claims 4, 17, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corkill (USP 6,216,674) in view of Fierro et al. (USP 6,549,857) as applied to claims 1, 14, and 26 above, and further in view of Jensen (USP 5,363,695).

Regarding claims 4, 17, and 31, the combination of Corkill and Fierro et al. discussed supra, discloses the claimed invention except a reporter coupled to receive information signals from the processor and configured to report depressurization event information.

Jensen teaches a reporter coupled to receive information signals from the processor and configured to report depressurization event information (e.g. Col.3, lines 53-60, Col.11, lines 47-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a reporter coupled to receive information signals from the processor and configured to report depressurization event information as taught by Jensen in a vehicle fuel system has on-board diagnostics for leak testing of Corkill in view of Fierro et al. for purpose of providing a leak detection system for rapidly detecting liquid leaks in a storage tank without the need to make modifications to the storage tank (Jensen, Col.3, lines 7-10).

5. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corkill (USP 6,216,674) in view of Fierro et al. (USP 6,549,857) as applied to claims 1, 14, and 26 above, and further in view of Morel et al. (USP 4,510,792).

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Regarding claim 32, the combination of Corkill and Fierro et al. discussed supra, discloses the claimed invention except step of determining the rate of change of the size of the aperture.

Morel et al. teach step of determining the rate of change of the size of the aperture (e.g. Col.4, line 35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include step of determining the rate of change of the size of the aperture as taught by Morel et al. in a vehicle fuel system has on-board diagnostics for leak testing of Corkill in view of Fierro et al. for purpose of providing an apparatus for measuring and displaying leakage flow rate Q in a tracer gas leakage detector (Morel et al., Col.2, lines 15-17).

Other Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Sydow et al. (USP 5,961,764) disclose reverse building process for the manufacture of complex-shaped vehicle fuel tanks.

Armentrout et al. (USP 5,553,483) disclose leak detection system.

McMaster et al. (USP 3,763,6910 disclose a meteoroid puncture of the cell for determining he size of the puncture.

Allowable Subject Matter

7. Claims 2-3, 5, 8-13, 15-16, 18, 20-25, 27-30, and 33-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten

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in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 43-50 have been objected to as containing informalities, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with other limitations of the claims, the cited prior arts fails to teach (A) a depressurization analyzer executable on a computer including: a depressurization detector executable on the computer to detect depressurization and to determine a size of a gas depressurization aperture in a gas pressurized compartment given temperature, pressure, and volume information relating to gas within the compartment; a depressurization predictor executable on the computer to determine a rate of growth of the aperture and to determine, one or more critical times during the depressurization; and (B) signal bearing media bearing the depressurization analyzer, as recited in (amended) claim(s) 43.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax

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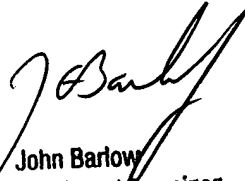
phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

August 19, 2004



John Barlow
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